

## International Space Station



How to Get New Research Onto ISS

◆ A 5-Phase Template





### How to Get New Research Onto ISS







PHASE 1: SPONSORSHIP

**Funding Sources** 

Points of Contact



PHASE 2: STRATEGIC PLANNING



PHASE 3: TACTICAL PLANNING



PHASE 4: OPERATIONS

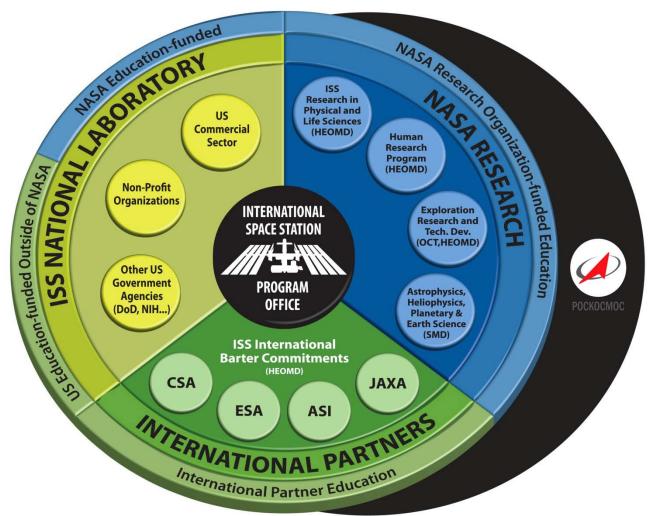


PHASE 5: POST-FLIGHT



# PHASE 1: SPONSORSHIP Funding Sources





For more information on research sponsorship and funding, see: <a href="http://www.nasa.gov/mission">http://www.nasa.gov/mission</a> pages/station/research/funding information.html

#### (a) NASA Research

Grant opportunities and information in NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) at http://nspires.nasaprs.com/external/

## (b) National Laboratory Research / The Center for the Advancement of Space in Science (CASIS)

The 2005 NASA Authorization Act designated the U.S segment of the space station as a national laboratory, enabling access by other Federal agencies, non-profits, and the private sector. Opportunities and information in CASIS' website at <a href="http://www.iss-casis.org/">http://www.iss-casis.org/</a>

#### (c) Educational Activities

Both NASA Education and CASIS offer education opportunities and information at NASA: http://www.nasa.gov/mission\_pages/station/research/research\_teacher.html and at CASIS: http://www.iss-casis.org/research.php

#### (d) International Partner Research

International investigators should seek sponsorship through their appropriate space agency.





# PHASE 1: SPONSORSHIP Points of Contact

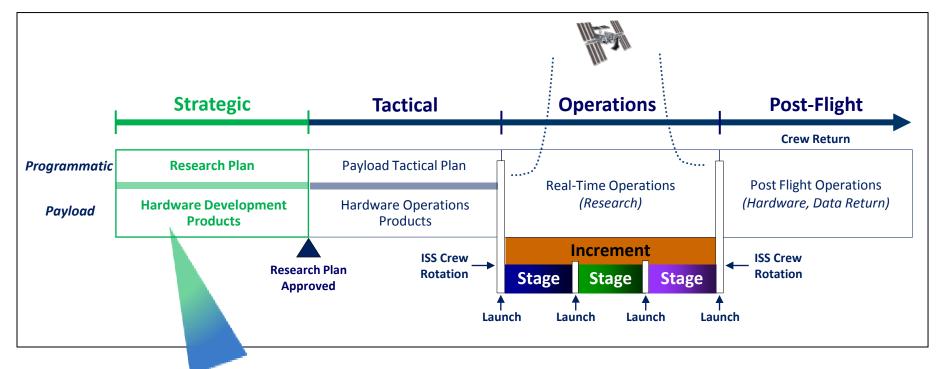


Sponsoring Organization (Funding Source)	Selecting Organization	ISS Integration Contact
Space Life and Physical Sciences Research and Applications - Human Research Program (NASA-funded)	NASA: Mike Barratt	Cindy Haven, NASA JSC
Space Life and Physical Sciences Research and Applications - Physical Science (NASA-funded) - Life Science (NASA-funded)	NASA: Brad Carpenter (acting)	NASA Research Manager (tbd), NASA/JSC
Astrophysics, Heliophysics, Space & Earth Sciences (NASA-funded)	NASA: Paul Hertz / Selecting Division Director	George Nelson, NASA/JSC
Technology Development (NASA-funded)	NASA Agency Sponsor Requesting the Technology	George Nelson, NASA/JSC
ISS National Laboratory (Other government agency funded, non-profit / commercially funded)	The Center for the Advancement of Space in Science (CASIS)	Marybeth Edeen, NASA/JSC
Education	CASIS or NASA Education	Marybeth Edeen, NASA/JSC



### PHASE 2: STRATEGIC PLANNING





Payload Developer Inputs WHO: Points of Contact

WHAT: Requirements Definition

WHEN: Operations Plan

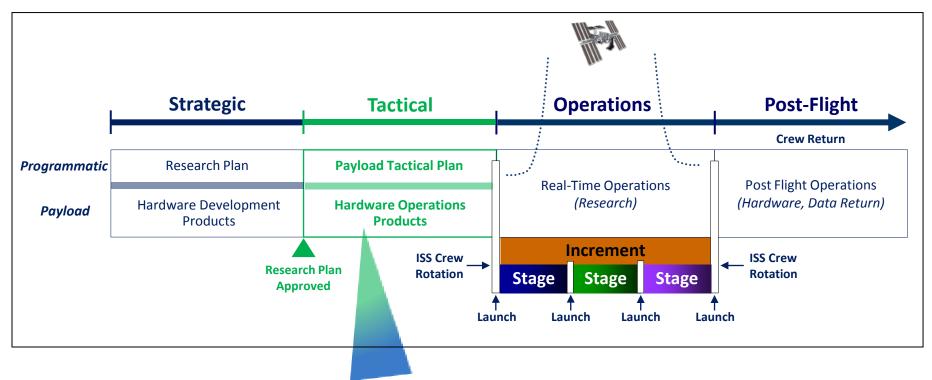
WHERE: Launch and On-Orbit Requirements

WHY: Investigation Objectives



#### PHASE 3: TACTICAL PLANNING





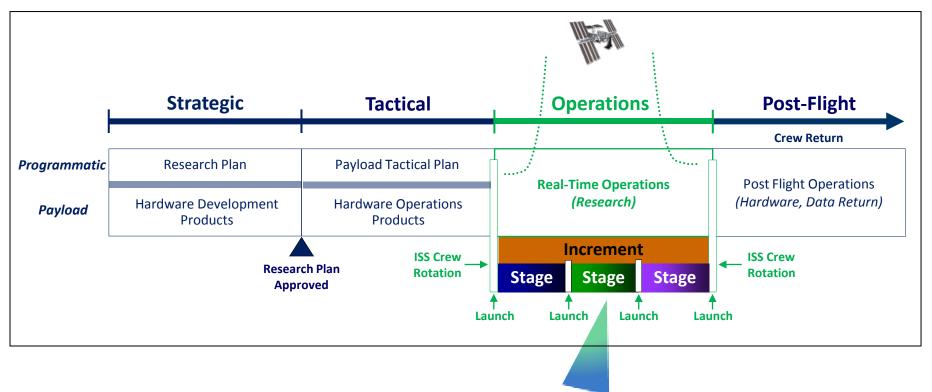
Payload Developer Inputs

- Changes to Baselined Research Plan
- Training Products and Procedures
- Safety Review Packages
- Hardware Verification Data
- Software Verification Data



#### PHASE 4: OPERATIONS





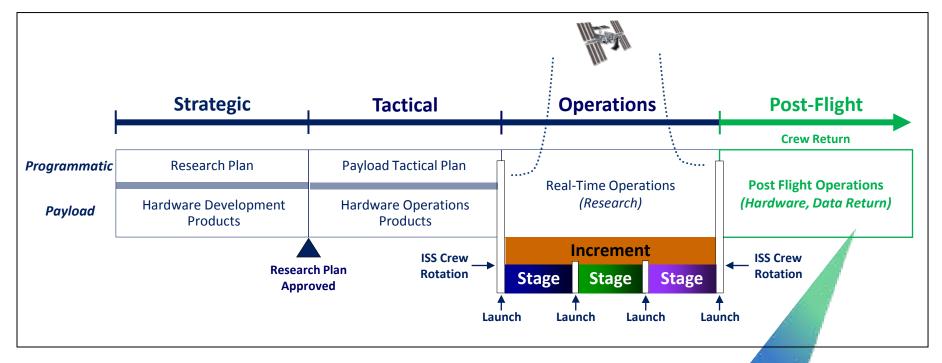
Payload Developer Inputs

- Investigator Participation Real-Time (e.g., Console Operations)
- Crew Conferences
- Anomaly Resolution
- Data Collection and Sample Return



### PHASE 5: POST-FLIGHT





Payload Developer Inputs

- Research Summary Updates
- 30-Day Reports
- Formal Publications



#### **ACRONYMS**



ASI = Agenzia Spaziale Italiana

CASIS = The Center for the Advancement of Space in Science

CSA = Canadian Space Agency

DoD = Department of Defense

ESA = European Space Agency

HEOMD = Human Exploration Operations and Mission Directorate

ISS = International Space Station

JAXA = Japan Aerospace Exploration Agency

JSC = Johnson Space Center

NIH = National Institutes of Health

OCT = Office of the Chief Technologist

SMD = Science Mission Directorate

tbd = To be determined

Tech. Dev. = Technology Development



#### FAOs

## (proposed and to be answered eventually for website posting)



- To whom do I submit an **idea** for an investigation to be flown on ISS?
- 2. Which organization(s) will **sponsor** my investigation to get integrated on ISS?
- 3. How are investigations **objectives** determined as to what is the most applicable research?
- 4. What is the **National Lab**, and should I fly my investigation as part of it?
- 5. What is **CASIS** and how is this organization relevant to my research proposed for ISS?
- 6. Who will pay for payload development associated with the investigation?
- 7. How can I collaborate with an International Partner(s)?
- 8. What is the step by step process in **manifesting** a new investigation?
- **How long** can I expect the entire process to take from investigation sponsor approval to implementation on ISS?
- 10. If I have flown an investigation on ISS **previously**, will integration for a new investigation be quicker?
- 11. How is my investigation to be **prioritized** for flight and who conducts this prioritization?
- 12. What are the **criteria** used to prioritize an investigation for flight on ISS?
- 13. How is an investigation **selected** for flight?
- 14. If the Space **Shuttle** is no longer flying, how will my investigation get to ISS?
- 15. Who funds launch services for my payload?
- 16. Do I have an **upmass** restriction for my payload?
- 17. Which, if any, of the new **commercial** space firms will be able to launch my investigation's payload to ISS?
- 18. When can I expect the new private space firms to begin offering commercial launches of payloads to ISS?
- 19. How is **crewtime** allocated to a particular investigation?
- 20. Will **someone** be assigned to help oversee the development and integration of my investigation's associated payload?
- 21. Will I be able to communicate with the crewmember who performs my investigation aboard ISS?
- 22. Is there a timeline for ISS investigation/payload integration?
- 23. What is meant by the research **strategic planning** process?
- 24. What is meant by the research tactical planning process?
- 25. What is involved in the research **mission integration** process?
- 26. Once my investigation is aboard ISS, how will I receive my data back down from ISS?
- 27. How are data shared, when can results be published, what publications are interested in ISS data findings, etc.?
- 28. Are there opportunities for education activities to be manifested for flight and operation aboard ISS?